

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 September 2003 (04.09.2003)

PCT

(10) International Publication Number
WO 2003/073659 A3

(51) International Patent Classification:
1/06, 1/40, 1/44

H04B 1/38,

Palle; Kronen 34, DK-9260 Gistrup (DK). STRANGE,
Jonathan, Richard; White Gables, 7 Manor Road,
Reigate, RH2 9LA (GB).

(21) International Application Number:

PCT/US2003/005260

(74) Agent: HENRY, Steven, J.; Wolf, Greenfield & Sacks,
P.C., 600 Atlantic Avenue, Boston, MA 02210 (US).

(22) International Filing Date: 21 February 2003 (21.02.2003)

(81) Designated States (*national*): CN, JP.

(25) Filing Language:

English

(26) Publication Language:

English

(84) Designated States (*regional*): European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,
IE, IT, LU, MC, NL, PT, SE, SI, SK, TR).

(30) Priority Data:

0204108.5

21 February 2002 (21.02.2002)

GB

Published:

10/331,623

30 December 2002 (30.12.2002)

US

— with international search report

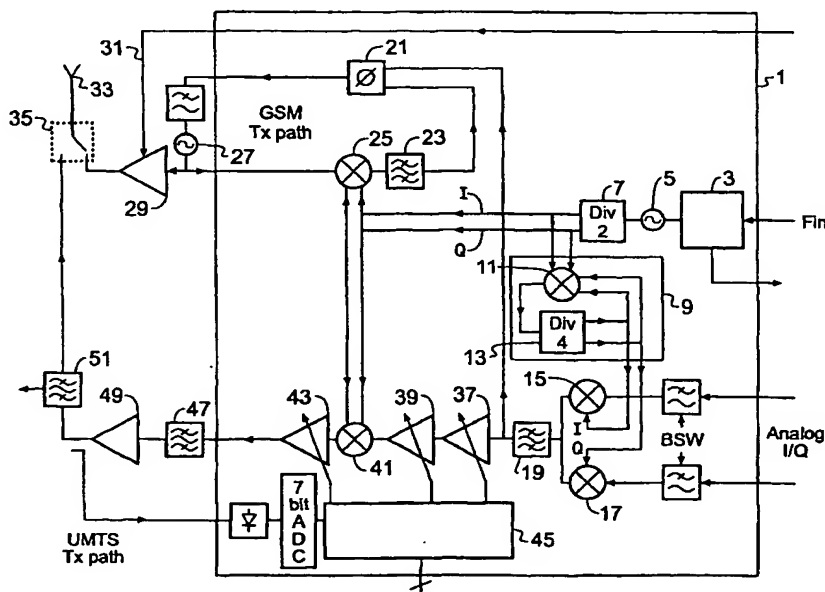
(71) Applicant: ANALOG DEVICES, INC. [US/US]; One
Technology Way, P.O. Box 9106, Norwood, MA 02062-
9106 (US).

(88) Date of publication of the international search report:
19 February 2004

(72) Inventors: ATKINSON, Simon; The Dane, Wayside
Walk, Heathfield, East Sussex TN21 0XW (GB). BIRK,

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: 3G RADIO



(57) Abstract: A dual mode transmitter (1) for GSM and UMTS operation is provided. The GSM and UMTS paths share an oscillator and an intermediate frequency stage. Also, with the exception of the final stage of power amplification, the transmitter is provided as an integrated device.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/05260

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04B 1/38, 1/06, 1/40, 1/44

US CL : 455/561,275,562,266

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 455/561,275,562,266

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,516,206 B2 (JANTTI) 04 February 2003 (04.02.2003), whole document.	1-32
A,P	US 6,405,025 B1 (KESKI-MATTINEN) 11 June 2002 (11.06.2002), whole document.	1-32
Y	US 6,014,551 A (PESOLA et al) 11 January 2000 (11.01.2000), whole document.	1-32
Y	US 5,794,159 A (PORTIN) 11 August 1998 (11.08.1998), whole document.	1-32



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "B" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

17 November 2003 (17.11.2003)

Date of mailing of the international search report

01 DEC 2003

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Pablo Tran

Telephone No. (703) 305-4760